

Unraveling the Dynamics of Escalating Competitiveness in Diagnostic Radiology Residency Matching



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Methods

Data focused on U.S. MD seniors from the National Resident Match Program's (NRMP) biannual published document, *Charting Outcomes in the Match*, from 2007 until 2022 (Table DR-1, Summary Statistics for Diagnostic Radiology) as well as its *Annual Main Residency Match Results and Data* from 2008 to 2023 (Table 1, Match Summary) was used to analyze multiple variables such as mean USMLE Step 1 & 2 scores, research productivity (mean number of abstracts, presentations, publications), and mean number of contiguous ranks. Each of these variables was compared between Matched Diagnostic Radiology Applicants (MDRAs), Unmatched Diagnostic Radiology Applicants (UDRAs), and matched applicants of all medical specialties combined, hereby referred to as All Specialties Matched Applicants (ASMAs).

Results

- From 2008 to 2023, amongst PGY-1 & PGY-2 Diagnostic Radiology (DR) residencies, the match rate decreased from 50.12% to 35.36% while the number of total positions increased from 1085 to 1149. (Fig. 1)
- For PGY-1 and PGY-2 MDRAs, the match rate decreased from 20.83% to 11.76% and 79.45% to 62.47%, respectively. (Fig. 1)
- Amongst MDRAs, both mean USMLE Step 1 (235 to 245) and Step 2 (237 to 253) scores increased (Fig. 2) and mean research productivity increased 285% from 2.8 to 8.0.
- Contiguous ranks for UDRAs and MDRAs increased from 3.0 to 7.5 (250%) and 12 to 14.9 (124%), respectively.
- There was a record high number of diagnostic radiology applicants with a 42.6% rise in the number of PGY-1 and PGY-2 applicants from 2015 (1862) to 2023 (3249).

Discussion

- The importance of scoring well on USMLE exams is clear.
 - Step 2 will likely assume greater importance.
- There was an 84% increase in the number of research experiences for MDRAs with UDRAs and ASMAs following suit.
 - Interested medical students appear to be adapting their pre-clinical workloads to allow for participation in a greater number of research projects.
- The average matched radiology applicant responded by doing more interviews and ranking more programs than in the past.
- Data from unmatched students had significantly lower numbers of contiguous ranks.
- It is wise for applicants to apply more broadly to a large number of residency programs to increase their chance of matching.

Conclusion

Though the number of diagnostic radiology residency programs and positions have increased incrementally over the past 15 years, the difficulty associated with matching remains as the number of applicants continue to increase as well. A substantial upward trend in USMLE Step 1 and 2 scores and research productivity further cements diagnostic radiology's increasing competitiveness. In the absence of Step 1 scores going forward, Step 2 may assume greater importance. It may behoove prospective applicants to invest time in research and apply more broadly with the goal of obtaining greater number of interviews and corresponding contiguous ranks to increase their chances of matching.

Figures

Fig. 1: PGY-1, PGY-2, and Combined Diagnostic Radiology Match Rates

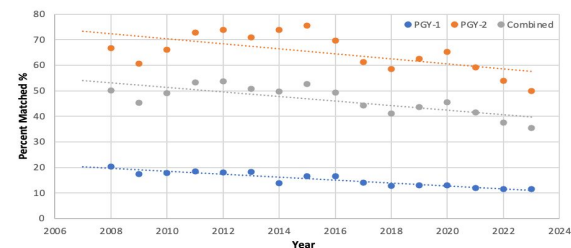
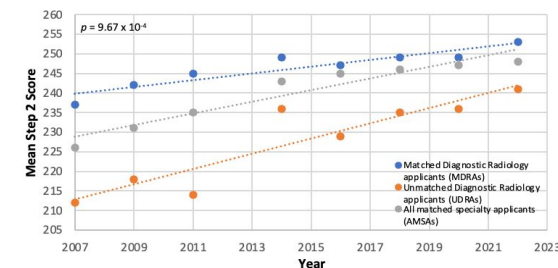


Fig. 2: Mean Step 2 Scores across MDRAs, UDRAs, and ASMAs

Top left: P-value for ANOVA test. * $p < 0.025$ vs. MDRAs.



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References

